the algorithms' PPV. **CONCLUSIONS:** We have demonstrated that MC/PV algorithms can be used to identify PsO patients with a high degree of accuracy, while PsO-AC accuracy requires further investigation. Such methods allow researchers to conduct retrospective studies in databases where diagnosis codes are absent.

PRM215

ASSESSING THE EFFECTIVENESS OF COUNTER MATCHING FOR IMPROVING THE EFFICIENCY OF THE NESTED CASE-CONTROL DESIGN IN OBSERVATIONAL STUDIES

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OBJECTIVES: The nested case-control (NCC) design offers a simple method for avoiding unreasonable assumptions in the evaluation of time-dependent treatment effect. Its results are easy to interpret. Its strength rests largely on the appropriateness of the controls which are matched to the cases- suggesting a matching strategy that ensures maximum number of discordant case-control pairs may be more efficient since effect estimation is based entirely on the off-diagonal data of the resulting 2x2 tables in the conditional logistic regression. In theory, the more off-diagonal pairs that are generated by the random sampling scheme, the more improvement we can expect on efficiency. The objective of this study is to assess the efficiency of counter-matching on treatment compared with the classical matching approach in the NCC design based on results from the cohort design using simulated data. **METHODS:** In each simulation of 1000 patients at 100 replications per run, we assumed an underlying event hazard of Weibull distribution using inputted values for the scale and shape parameters, treatment, age and sex as the factors. Each run involved distinct treatment prevalence of between 10%-50% with event rate varying from common to very rare. We compared the proportion of matched pairs (at 1 control per case) used in the analyses of the resulting data between the classical and counter matching strategies. **RESULTS:** The counter-matched strategy was more efficient than the classical approach. The proportion of matched pairs used was on average over ten times more and it also gave mean effect estimates which were more consistent with the full cohort values, particularly for low treatment exposure and rare events. **CONCLUSIONS:** Our results suggest counter matching is more efficient and more accurate estimates than classical matching in nested case-control design. These benefits may be particularly important for studies involving rare events or low treatment exposure.

PRM216

ASSESSMENT OF THE METHODOLOGICAL QUALITY OF RANDOMIZED CONTROLLED TRIALS PUBLISHED IN "RUSSIAN ALLERGOLOGY JOURNAL" IN 2009-2013

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OBJECTIVES: To assess the methodological quality of randomized controlled trials (RCTs) published in "Russian Allergology Journal" (RAJ) in 2009-2013. **METHODS:** Retrospective analysis of 96 original publications was carried out. For 8 RCT the risks of biases were assessed using the methodology of the Cochrane Collaboration. Accuracy of statistical analysis was assessed in accordance with established in 2009 journal's requirements, made in accordance with best international practice. **RESULTS:** 96 articles were analysed, 8 (8%) of them were identified as RCTs. All the RCTs have a high risk of the biases and major mistakes in the statistical analysis. **CONCLUSIONS:** The methodological quality of RCTs is insufficient and needs to be improved. We consider that the most important role should play improvement of trials' planning. Collaboration with the experts in clinical trials' methodology is strongly recommended. The analysis empowers researchers to consider existing experience and to improve methodological quality of RCTs, their relevance to international standards.

PRM217

SIMULATION OF AN ADDITIONAL GO/NO-GO EFFICACY INTERIM ANALYSIS IN A HEAD-TO-HEAD RCT

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OBJECTIVES: A head-to-head randomized clinical trial (RCT) to evaluate a new drug is financially risky, because a positive outcome is uncertain. We simulate and evaluate a head-to-head RCT design incorporating an additional go/no-go efficacy interim analysis to show the consequences of this additional interim analysis. **METHODS:** We simulate the endpoint event-free-survival (EFS) of patients in a head-to-head RCT. The decision rule of the additional interim efficacy analysis (i.e. stop or continue) depends on the number of patients (i.e. 300,400 or 500 patients) and the significance level (i.e. α=0.05, α=0.10 or α=0.20) of the interim analysis. The RCT without an interim-analysis has significance level α=0.05, power=0.86 and sample size 800. **RESULTS:** Each combination of sample size and significance level, which is called a scenario, is investigated by simulating 2,000 trials of 800 patients. Per simulated scenario we report, among others, the "Probability of positive final analysis test result GIVEN negative interim analysis test result" (= wrongly stopped) and the "Probability of negative final analysis test result GIVEN positive interim analysis test result" (= wrongly continued). The results of the first scenario, i.e. an interim analysis at 300 included patients and significance level α=0.05, are as follows. If the actual improvement of the EFS hazard rate is 0%, the abovementioned probabilities are 3.65% and 7.85%. An actual improvement effect of 5% changes the probability values to 20.25% and 12.80, while an actual improvement effect of 10% causes the probability values 28.50% and 5.55%. **CONCLUSIONS:** The simulated probabilities were mainly influenced by the actual EFS improvement. The smaller the actual outcome improvement, the greater the probability of continuing the trial up to 800 included patients without getting a positive final test result (i.e. wrongly continued). The developed software (i.e. R-codes) can easily be applied to other cases.

PRM218

NEGATIVE REIMBURSEMENT CONSEQUENCES FROM TRIAL DESIGN CHOICES

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OBJECTIVES: Health Technology Assessments (HTA) use clinical trial data to determine comparative efficacy and cost-effectiveness; thus study design plays a roll in market access. The objective is to determine how often reimbursement decisions cite trial design defects. **METHODS:** We analyzed 1,702 HTAs from CADTH, G-BA, HAS, NICE, PBAC, and SMC. We examined the clinical assessment rationale for the decision and the reimbursement decisions. An explicit trial design defect was defined as a clinical assessment of "inappropriate comparator" or "inappropriate patient population." Clinical assessments of lower, uncertain, or unknown efficacy or a clinical determination of insufficient or lack of evidence were defined as potential trial design defects. **RESULTS:** Reviews that cited trial defects resulted in significantly more negative reimbursement decisions (6.6%) than positive reimbursement decisions (0.4%; $p<.001$). This pattern held true for each individual agency examined. G-BA was the agency most likely to cite an explicit trial deficit (39%), while HAS was the least likely (0.6%). In addition, significantly more reviews that cited a potential trial defect resulted in negative reimbursement decisions (44%) than positive reimbursement decisions (5.5%; $p<.001$). This also held true for each agency. Again, G-BA was most likely to note a potential trial defect in reviews (46%) while SMC was least likely (6.4%). Among disease conditions with more than 10 reviews, explicitly cited trial defects were mostly frequently seen in Cystic Fibrosis and Parkinson's Disease (15% and 13%, respectively). Potential trial defects were most frequently cited in Atrial Fibrillation and Depression reviews (42% and 39% respectively). **CONCLUSIONS:** Explicit and potential trial design issues have negative consequences for reimbursement outcomes. Negative decisions are more likely than positive decisions to cite trial design issues. G-BA is more inclined than other agencies to cite these trial design issues when issuing their reimbursement decisions. Manufacturers should consider market-access outcomes when designing clinical trials.

PRM219

EVIDENCE RESULTING FROM CHART REVIEW METHODOLOGY APPLIED TO NAMED PATIENT PROGRAMME PARTICIPATION AND COMPASSIONATE MEDICATION USE: PERI-APPROVAL APPROXIMATION OF POST-MARKET PRACTICE PATTERNS AND COSTS

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OBJECTIVES: Compassionate use programmes provide peri-approval drug access based on unsolicited physician requests for patients with unmet need. Practice pattern evaluations in this context, using chart review methodology, permits the collection of pre-approval data outside of clinical trial settings that can approximate real-world post-market use. Data can be used to inform important economic evaluations, value dossiers, and drug safety assessments. **METHODS:** Study design and operational considerations related to chart review studies of compassionate use populations have been summarized by evaluating three multi-national case studies. **RESULTS:** The source populations of patients were drawn from compassionate use programmes providing oral anti-cancer therapies. These were initiated pre-approval following positive clinical trial findings. Countries included Australia, Belgium, Greece, Ireland, Israel, Italy, The Netherlands, New Zealand, Spain, Switzerland and the United Kingdom. Data including patient characteristics, patterns of care and drug dosing, duration of treatment and reasons for treatment discontinuation, overall survival, clinical benefit, progression free survival and adverse and serious adverse events are being collected to inform health economic and other burden of illness assessments. Site and patient selection was performed using compassionate use enrollment data, facilitating an efficient study start-up. Data were cleaned at point of data entry and via an electronic query process in real-time resulting in tailored international datasets. Patients provided consent for their medical data to be used prior to initiating compassionate use therapy, and additional ethical approval for the chart review was sought on a local and/or national level. Chart review study design requires a balance between scientific and operational rigor and practicality and feasibility. **CONCLUSIONS:** Peri-approval chart review studies of patients in compassionate use programmes offer an important opportunity to characterize patterns of use and associated treatment costs as well as the clinical impact of investigational medications in non-trial settings to inform clinical, health economic and market access decisions.

PRM220

IMMATURE SURVIVAL DATA FROM EARLY TRIAL TERMINATION – THEORY AND HTA PRACTICE

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OBJECTIVES: Scientific research suggests that randomized controlled trials terminated early for benefit considerations systematically overestimate treatment effects of the primary outcome. This study assessed whether Health Technology Assessment (HTA) agencies accept the increased uncertainty around overall survival (OS) estimates in oncology trials arising from early termination. **METHODS:** Public scientific databases were searched to identify scientific articles and pivotal trials involving early trial termination. A selection of related HTA appraisals, published between January 2011 and February 2014, were analysed. Current scientific evidence on the impact of early stopping on outcome estimates was compared to the conclusions made by 11 HTA agencies. **RESULTS:** Twelve scientific articles, 12 pivotal trials, and 31 related HTA appraisals were selected for in-depth analysis. The scientific literature suggests that more stringent significance levels in the repeated interim